

August 7, 2002

To: All Potential Responders of LOI Solicitation RAT-2-32616

Subject: Amendment #1 to the Letter of Interest Solicitation RAT-2 –32616 “NREL/DOE Distributed Power Program Distribution and Interconnection Research and Development”

The following information is provided in response to the questions received as of July 30, 2002 regarding the subject LOI solicitation. Some questions have been paraphrased for a more succinct inquiry.

Question 1:

Where would the 4 program meetings per year be held? What are the minimum requirements for supporting the review meetings?

Answer to Question 1: Current plans are for an Annual Program Review Meeting each January in Washington DC, followed by 3 quarterly review meetings during each year. For planning and budgeting purposes, estimate costs for two quarterly meetings held at NREL in Golden, CO and one quarterly meeting held in Washington, DC. Examples of information expected from a subcontractor at these meetings can be found under the current quarterly and annual proceedings, which are posted on the website, <http://www.eren.doe.gov/distributedpower/>.

Question 2:

With reference to Section 5.1 Category A - Advanced Universal Interconnection Technology, interconnection traditionally includes switchgear, SCADA, protective features and does not traditionally include any equipment that carries out the power conversion that would allow the unusable output of a DER to be linked to the grid. Would a low cost, modular, universal power conditioner that enables any type of DER to be connected to the grid fall within the scope of this solicitation?

Answer to Question 2: Yes.

Question 3: Please delay the due date by three weeks.

Answer to Question 3: Current plans are to keep the current date in effect, which is **August 27, 2002, by 4:00 P.M. Mountain Time**. Any changes to this date will be posted on the NREL website at <http://www.nrel.gov/contracts/index.html>.

Question 4: With reference to Section 5.1 Category A, bullet 1, “Inverter-Based Interconnection Technology,” does the cross-DER-platform capability refer to the inverter only, the power conditioning system (PCS), or either way, to be determined by the Responder?

Answer to Question 4: The LOI language in section 5.1 includes the following language: “Standardization will also support wide deployment of interconnection systems that provide highly multi-functional interfaces that optimally control generation, storage, and load, while providing ancillary services to the utility grid.” The Responder is expected to present their idea(s) in their LOI response. No limitations should be imposed on what comprises an interconnection system.

Question 5: Should we submit separate LOIs for different categories, or can one LOI cover several categories?



Answer to Question 5: One LOI Response CANNOT cover more than one category. In addition, if a Responder has more than one unique idea for a category, submit more than one unique LOI in the same category.

The first two bullets of Section 6.0 of the LOI Solicitation are quoted below, with emphasis in bold added here:

§ “Responses will be accepted only if submitted by a U.S. organization (defined as an organization incorporated in the U.S.) or submitted by a team led by a U.S. organization. Responders may be U.S. industry, consultants, colleges and universities or other U.S. business entities. Industry is encouraged to team with other programs, universities or colleges. Responders may submit **more** than one **unique** LOI. The same responders may be members of other teams in additional responses.

§ A member of a team may be of different teams in separate LOIs. A **unique** LOI **must** be submitted for **each category** to which the Offeror is responding. The same entity or team may submit multiple LOIs including **multiple unique** LOIs in the **same** category.”

Question 6: What are the total dollars available for awards and how will funds be divided among the four categories?

Answer to Question 6: Section 7.0 of the LOI Solicitation states “It is the intent of NREL to make up to fifteen (15) subcontract awards under this solicitation. This number of awards may vary due to the responses received and the availability of DOE funds.” The NREL cost shares are different for each category and are listed in Section 7.0 of the Solicitation. The number of awards for each category is not predetermined and will depend upon the quality of Responses received in each category and the availability of DOE funds in FY 2003.

Question 7: What level of detail is required in a Response to this LOI Solicitation?

Answer to Question 7: The requirements for responses to the LOI Solicitation titled “NREL/DOE Distributed Power Program - Distribution And Interconnection Research And Development,” are described in the complete Solicitation document.

Question 8: Our LOI submission will be for Category A, focusing primarily on addressing the communications requirements of the DER system via the use of robust powerline communications technology.

1. What are the data throughput requirements of the network?
2. What is the topology of the "typical" network with respect to the electric power system network, e.g., substation, medium and low voltage lines, and low voltage transformers?
3. What is the average and maximum distance across which communications would need to be established between two points?
4. What number of nodes do you see typically operating on the network? What are the typical network traffic scenarios?
5. Is it foreseen that the DER system would require the ability to provision and prioritize the network bandwidth to ensure that critical communications get priority access over less critical communications?
6. Has a target per node cost to enable communications been established? Does this unit cost assume an annual volume?
7. Is the main goal of the first phase of this project establishment of the feasibility of a proposed solution or the demonstration of a solution to support the DER System?

Answer to Question 8: Responders are expected to determine their best idea and plan for universal interconnection technology as requested in Section 5.1, particularly the four bullets contained in that section of the LOI. They should submit an LOI Response detailing their approach, in accordance with the guidelines specified in the Solicitation. Additional information

about distributed generation and interconnection technology can be found from several sources, including the Department of Energy website, <http://www.eren.doe.gov/distributedpower/>.

Question 9: Are state agencies eligible to submit LOIs for this solicitation?

Answer to Question 9: Yes.

Question 10: What qualifies as a U.S. Company and/or U.S. team?

Answer to Question 10: For the purpose of this LOI, a company/organization incorporated in the U.S. and operating within the U.S. is considered a U.S. company/organization. A U.S.-led team must be led by a U.S. company/organization.

Please be reminded that technical and cost proposals are due in original and eleven (11) hard copies only (no fax or e-mail transmittals) **not later than 4:00 p.m. on August 27, 2002.** Also, **due to increased security concerns, no hand-delivered packages will be accepted.** Proposal delivery must be made via overnight or postal carrier.

(SEE ATTACHED ACKNOWLEDGEMENT SHEET)

Amendment No. 1 to LOI No. RAT-2-32616
August 7, 2002

Responders are required to acknowledge receipt of this Amendment No. 1 with any Letter of Interest submitted in response to this solicitation.

RECEIPT ACKNOWLEDGED

COMPANY_____

NAME AND TITLE _____

DATE _____



U.S. DOE DP Program

- Overview
- Mission
- Activities
- Review Meetings
- Contacts

What is Distributed Power

- Overview
- Applications
- Benefits
- Barriers

Interconnection Issues

- Overview
- IEEE Standards
- State Activities
- Other Activities

News & Information

- Headlines
- Glossary
- Events
- Workshops
- Library
- Links

Welcome

DOE's Distributed Power Program is responsible for distributed resources' system integration research and development. Here we feature information on the Distributed Power Program and its activities. We also feature news and information about barriers to distributed power, policies and regulations, technical interconnection issues and upcoming events.

Lead Story

DOE/NREL Announce Letter of Interest Solicitation for Distributed Generation R&D

The National Renewable Energy Laboratory is issuing a Letter of Interest Solicitation for research and development efforts through relationships and partnerships with industry, the university community and other qualified organizations and consultants to address a range of activities related to interconnecting and integrating distributed energy resources.

[More Details...](#)

Current Headline

NARUC Releases Draft DG Interconnection Procedures and Agreements for Comment

Over the last few years, several States have completed or are in the process of completing distributed generation interconnection procedures and agreements for small generators.

[More Details...](#)

Visit the Program Test Facilities



Distributed power program test facilities in Colorado (NREL) and Nevada.



- [Nevada Test Site - Field Validation Testing](#)
- [NREL Test Facility - DP Systems Characterization](#)

Featured Event

[U.S. Department of Energy Joint Distributed Power and Industrial DG Quarterly Program Review](#)

July 9 & 10, 2002

University of Wisconsin-Madison, Madison, WI

Featured Item

[NREL/DOE Distributed Power Program Distribution and Interconnection Research and Development, Solicitation for Letters of Interest \(LOIs\)](#)
[No. RAT-2-32616](#)

[\[DER Home\]](#) [\[Office of Power Technologies\]](#) [\[U.S. Department of Energy\]](#) [\[EREN\]](#) [\[Site Map\]](#)

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NREL Contracting Opportunities

Partnerships mean a lot at NREL. In fact, we have been building a foundation of partnerships since we opened our doors more than 20 years ago. As part of our unique mission, we focus on helping industry develop successful products and services that reduce pollution, strengthen the economy, and ensure America's energy security.

Central to this mission is our commitment to small businesses — a commitment that's at the heart of everything we do. From collaborative research to [technology transfer](#) and purchasing, we seek partnership opportunities with small companies to help commercialize renewable energy technologies and to supply us with essential products and services.

[Partnerships for Success](#)

- Our commitment to small business

[Doing Business with NREL](#)

- How to do business with NREL

[Purchasing and Subcontract Opportunities](#)

- NREL vendor or subcontractor [Registration](#)
- [Current Solicitations](#) (Request for Proposals)
- [Request for Proposals - Related Documents and Forms](#)

[Security & Privacy](#)